APRIL/MAY 2023

FBC11/CBC11 — CELL BIOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is prokaryote?

2. Define a cell.

3. Recall the models of plasma membrane.

4. Explain the term active transport.

5. What are lysosomes?

6. Classify ribosomes.

7. What is the role of cristae?

8. Outline the role of flagella.

9. Name any two components of nucleus.

10. Compare Go phase and Gl phase (Any two points)

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Identify the components of a eukarotic cell with a neat diagram.

Or

(b) Example the significance of cell theory.

12. (a) Make use of plasma membrane to explain its major role in a cell.

Or

(b) Analyse the role of membrane proteins.

13. (a) Identify the functions of RER and SER.

Or

(b) Examine the structural features of ribosomes.

14. (a) Interpret the importance of cilia with reference to its structure.

Or

(b) Example the structural features and functions of action.

15. (a) Explain the components and functions of nucleolus.

Or

(b) Appraise the salient features of tight junctions.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the structure of a prokaryotic cell.

17. Deduce the mechanism of Uniport, Symport and facilitated diffusion with diagram.

18. Explain the functional importance of lysosomes in a cell.

19. Elaborate the structure and functions of Actin.

20. Discuss the various cell adhesion molecules.
